

REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

Upon entry of the above amendment, claim 9 will have been canceled and claims 1, 3 and 5 to 8 will have been amended. Accordingly, claims 1 to 8 are currently pending. No new matter has been added.

This amendment changes and deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

Rejections under 35 U.S.C. § 102

Claims 1, 5, 7 and 9 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,032,699 to Cochran et al. ("Cochran"). Claims 1-9 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,005,613 to Stanley ("Stanley"). Claims 1-9 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,285,744 to Grantham et al. ("Grantham"). Applicants respectfully traverse these rejections for at least the following reasons.

Independent claim 1 is directed to a flexible hose comprising a cylindrical inner hose and a cylindrical outer hose. The inner and outer hose "are configured to allow high pressure refrigerant of the cycle to flow through an interior of the inner hose and low pressure refrigerant of the cycle to flow through a space between the inner hose and the outer hose without increasing the pressure loss of each refrigerant." As an initial matter, applicants note that the inner and outer hose are configured to allow flow of refrigerant without increasing the pressure loss of each refrigerant in the manner recited. Thus, the recitation of flow of refrigerant in the hose of claim 1 is not merely intended use, but requires a particular structure to allow for such flow. For example, in some embodiments the pressure loss in the refrigerant passageway may be suppressed to low levels due to each hose having a wall surface with a gentle curvature as shown in the drawings. In a vehicular refrigerating cycle, it

is generally accepted that preventing pressure loss of each refrigerant from increasing is important, because the pressure loss has an adverse effect on a refrigerant performance of the cycle. Applicants submit that the references cited in the rejection fail to disclose a hose with structure such that any inner and outer hoses “are configured to allow high pressure refrigerant of the cycle to flow through an interior of the inner hose and low pressure refrigerant of the cycle to flow through a space between the inner hose and the outer hose without increasing the pressure loss of each refrigerant.”

Cochran discloses a pipe for use as a fuel supply with pressurized inner gas passageways, which is configured as a double-layer conduit. In one embodiment, Cochran discloses ribs 20 installed on an inner surface of an outer pipe 12 (and/or outer surface of an inner pipe 10) in a protruding manner along a longitudinal direction of the pipe in a space between the inner pipe 10 and outer pipe 12 (see FIGS 1, 8 and 10). In another embodiment, Cochran discloses a monofilament thread 92 helically wound around the outer surface of the inner pipe 10 along the longitudinal direction of the pipe in a space between the inner pipe 10 and outer pipe 12 (see FIG. 11). Therefore, the pressure loss in any pressurized inner gas passageway of Cochran would increase in comparison with the flexible hose of claim 1, because a wall surface of each pipe is uneven in the Cochran device. As a result, the pipe of Cochran does not meet the limitations of claim 1, and would not be appropriate for a refrigerant passageway.

Stanley discloses a hose for use as a fuel supply and fuel vapor return passageways, which is configured as a double layer conduit. In one embodiment of Stanley, internal corrugations 15 are installed on an inner surface of an outer hose 12 in a protruding manner along a longitudinal direction of the hose 10 in a space between the outer hose 12 and an inner hose 26 (see FIG. 1). Therefore, pressure loss in the fuel vapor return passageway of Stanley would increase in comparison with the flexible hose of claim 1, because a wall surface of the outer hose is uneven in the Stanley device. As a result, the hose of Stanley does not meet the limitations of claim 1, and would not be appropriate for a refrigerant passageway.

Grantham discloses a hose for use as a fuel supply and fuel vapor return passageways, which is configured as a double layer conduit. In one embodiment of Grantham, a wire 48 and a filament 52 are helically wound around an outer surface of an inner hose 12 along a longitudinal direction of the hose 10 in a space between the inner hose 12 and an outer hose 16 (see FIG. 8). Therefore, pressure loss in the fuel vapor return passageway of Grantham would increase in comparison with the flexible hose of claim 1, because a wall surface of the inner hose is uneven. As a result, the hose of Stanley does not meet the limitations of claim 1, and would not be appropriate for a refrigerant passageway.

Claims 2 to 8 are patentable by virtue of their dependency from claim 1, as well as for further patentable features recited therein. Applicants respectfully request reconsideration and withdrawal of the rejections, and an early indication of the allowance of currently pending claims 1 to 8.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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